I. AMENDMENTS

Amendments to the Claims:

The following listing of claims replaces all prior versions and listings of claims in the application:

In the Claims:

1 – 3. (Canceled).

4. (Currently Amended) A pair of oligonucleotides comprising a sense oligonucleotide and an antisense oligonucleotide, being capable of directing PCR amplification resulting in a polynucleotide fragment of a polynucleotide sequence encoding a protein selected from the group consisting of ~~SEQ ID NO:3~~ a) SEQ ID NO:2 and b) SEQ ID NO:2 having a phenylalanine residue instead of a tyrosine residue at position 246, said polynucleotide fragment being part of said polynucleotide sequence that encodes said protein ~~sequence having heparanase activity~~.

5. (Previously Presented) The pair of oligonucleotides of Claim 4, wherein said polynucleotide sequence is as set forth in SEQ ID NO:1.

6. (Previously Presented) The pair of oligonucleotides of Claim 4, wherein said pair of oligonucleotides is set forth by SEQ ID NOs: 6 and 7.

7. (Previously Presented) The pair of oligonucleotides of Claim 4, wherein at least one of said sense oligonucleotide and said antisense oligonucleotide is designed having an endonuclease cleavage site, so as to enable cloning of a resulting PCR product generated therewith into a vector.

8. (Previously Presented) The pair of oligonucleotides of Claim 4, wherein at least one of said sense oligonucleotide and said antisense oligonucleotide is labeled with a detectable moiety.

9. (Previously Presented) The pair of oligonucleotides of Claim 8, wherein said detectable moiety is selected from the group consisting of a chromogenic moiety, a fluorogenic moiety, a light-emitting moiety and a radioactive moiety.

10. (Currently Amended) A kit for detecting presence of a heparanase encoding nucleic acid, comprising a sense oligonucleotide and an antisense oligonucleotide being capable of directing PCR amplification resulting in a polynucleotide fragment of a polynucleotide sequence encoding a protein selected from the group consisting of a) SEQ ID NO:2 and b) SEQ ID NO:2 having a phenylalanine residue instead of a tyrosine residue at position 246, said polynucleotide fragment being part of said polynucleotide sequence that encodes said protein ~~SEQ ID NO:3, said sequence having heparanase activity~~.

11. (Previously Presented) The kit of Claim 10, wherein said polynucleotide sequence is set forth in SEQ ID NO:1.

12. (Previously Presented) The kit of Claim 10, wherein at least one of said sense oligonucleotide and said antisense oligonucleotide is designed having an endonuclease cleavage site, so as to enable cloning of a resulting PCR product generated therewith into a vector.

13. (Previously Presented) The kit of Claim 10, wherein said pair of oligonucleotides is set forth by SEQ ID NO:6 and 7.

14. (Previously Presented) The kit of Claim 10, wherein at least one of said sense oligonucleotide and said antisense oligonucleotide is labeled with a detectable moiety.

15. (Previously Presented) The kit of Claim 14, wherein said detectable moiety is selected from the group consisting of a chromogenic moiety, a fluorogenic moiety, a light-emitting moiety and a radioactive moiety.

16-22. (Canceled).

23. (New) The pair of oligonucleotides of Claim 4, wherein said polynucleotide sequence is as set forth in SEQ ID NO:1, provided that T replaces A at position 799.

24. (New) The pair of oligonucleotides of Claim 4, wherein said protein is SEQ ID NO:2.

25. (New) The pair of oligonucleotides of Claim 4, wherein said protein is SEQ ID NO:2 having a phenylalanine residue instead of a tyrosine residue at position 246.

26. (New) The kit of Claim 10, wherein said polynucleotide sequence is as set forth in SEQ ID NO:1, provided that T replaces A at position 799.

27. (New) The kit of Claim 10, wherein said protein is SEQ ID NO:2.

28. (New) The kit of Claim 10, wherein said protein is SEQ ID NO:2 having a phenylalanine residue instead of a tyrosine residue at position 246.